



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/553,583

10/17/2005

Peter Rippl

71917

4015

23872 7590 05/28/2009
MCGLEW & TUTTLE, PC
P.O. BOX 9227
SCARBOROUGH STATION
SCARBOROUGH, NY 10510-9227

EXAMINER

CLARK, MAYA ANGELICA

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

05/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,583	RIPPL, PETER	
	Examiner	Art Unit	
	MAYA CLARK	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 13-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/10/2006;10/17/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because they fail to show robots (18,19,20) and a machining station (16) as explained on line 3 of the abstract. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

1. The abstract of the disclosure is objected to because of the following informalities: any references to figures located in the specification shall not be allowed. Correction is required. See MPEP § 608.01(b).

Claim Objections

1. Claim 13 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 2. Claim 14 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 3. Claim 15 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4. Claim 16 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 5. Claim 17 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 6. Claim 18 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 7. Claim 19 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 8. Claim 20 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 9. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3742

Claims 5 and 16 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The moving unit has not been disclosed.

Claim Rejections - 35 USC § 102

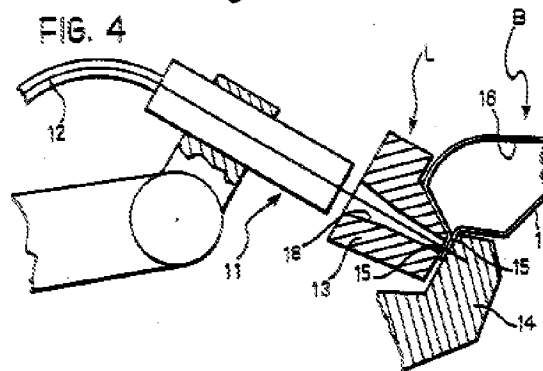
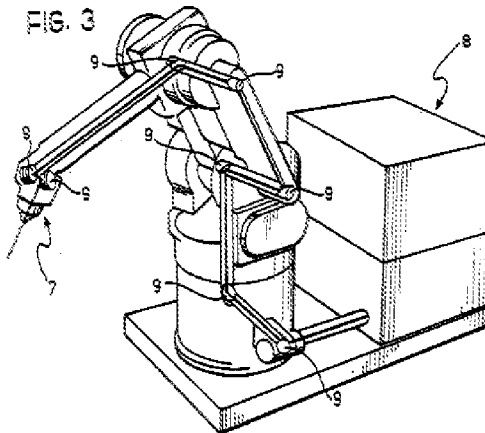
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 7, 8, 10, 12, 13, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated over Alborante.

Regarding claims 1, 2, 10, 12, and 13, Alborante discloses a robot laser welding system and process for welding one or more components. The device is made up of one or more laser focusing welding heads (7-fig.3 below and 11-fig.4 below) with the plurality of the laser welding heads connected to an external laser beam source (8-fig.3 below) by means of one or more laser beam guides i.e. optical fibers (12-fig.4 below) and a conveyor line (not shown) for moving the components relative to the one or more laser heads (col.1-lines 8-23 and lines 34-54; col.2-lines 60-68; col.3-lines 7-10). This laser welding device allows for welding to be completed simultaneous thereby reducing the overall production time.



Regarding claims 8 and 19, Alborante discloses a laser welding device with one or more laser focusing welding heads as discussed above.

Alborante fails to disclose a focal length of approximately 200mm to 400mm.

It would have been an obvious matter of design choice to a person of ordinary skill in the art to have the focal length to be in a range between 200mm to 400mm because discovering a workable focal length would have been a mere design consideration based on the desired amount focusing that needs to occur in order to more accurately weld the components. Such a modification would have involved only routine skill in

Art Unit: 3742

the art to accommodate the focal length requirement. It is noted that discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1995)).

Regarding claims 7 and 18, Alborante discloses a laser focusing welding device wherein said moving means for said components is controlled according to the focal distance of the welding head (7-fig.3 above and 11-fig.4 above).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5, 11, and 14-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Alborante in view of Sciaky et al (US 4654505) hereinafter .

Regarding claims 3, 11, and 14, Alborante fails to explicitly disclose a robot that is multiaxial.

Sciaky discloses a laser beam welding apparatus with a multiaxial robot. (Sciaky- col.4, lines 39-44). The positioning of the laser head can be oriented to a variety of axial positions in order to accurately weld the components

It would have been obvious to one of ordinary skill in the art to modify the Alborante reference to include the Sciaky reference since the Sciaky reference has a versatile robot capable of orientating itself along with the laser head in the desired axial position in order to properly weld the components.

Regarding claims 4 and 15, Alborante fails to explicitly disclose a laser welding device wherein said laser welding head is arranged stationarily.

Sciaky discloses a laser beam welding apparatus in which the laser head is held fixed by a positioning and gripping means (Sciaky-col.4, lines 52-57). The positioning and gripping means prevents unnecessary of movement of the laser head during the actual welding process.

It would have been obvious to have one of ordinary skill in the art to modify the Alborante reference to include the Sciaky reference since the Sciaky reference provides for a laser head that is fixed in order to prevent sudden movements that could alter the outcome of the welding process. Regarding claims 5 and 16, Alborante fails to explicitly disclose a laser welding device wherein said laser welding head can be arranged nonstationarily by means of a moving unit.

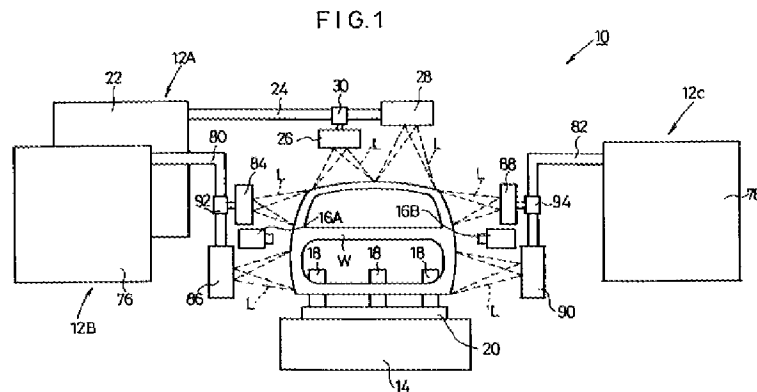
Sciaky discloses a laser beam welding apparatus in which the laser welding head is nonstationary in that the welding head is attached to a movable positioning and gripping assembly (Sciaky-col.4, lines 58-65). A nonstationary laser welding head allows for it to move in close to the components that are being welded in order to achieve precise welds.

It would have been obvious to have one of ordinary skill in the art to modify the Alborante reference to include the Sciaky reference since the Sciaky reference provides for the means to move the laser welding heads so that the welding head can move into the desired position preferably closer to the components to be welded so that better welding results can be achieved.

5. Claims 6,9,17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Alborante reference in view of Maruyama et al (US 6072149), hereinafter Maruyama.

Regarding claims 6 and 17, Alborante fails to disclose a laser welding device wherein said laser welding head has one or more scanner heads for the controllable deflection of said laser beam.

Maruyama discloses a laser beam welding apparatus with one or more scanner heads (26 and 28-fig.1 below) for the controllable deflection of said laser beam (L-fig.1 below) (Maruyama-col.2, lines 66-67; col.3, lines 4-33; col.4, lines 51-67; col.5, lines 34-62). Each scanner head can deflect the laser beam from a position spaced widely apart from the workpiece thereby preventing spatter which is produced when the workpiece is welded (Maruyama-col.5, lines 58-62).



It would have been obvious to have one of ordinary skill in the art to modify the modified Alborante reference to include the Maruyama reference since the Sciaky reference discloses scanner heads capable of accurately deflection laser beams so that the resulting spatter from the completed welding process is essentially reduced.

Regarding claims 9 and 20, Alborante fails to disclose one or more laser welding devices with the inclusion of a controllable beam switch.

Maruyama discloses a laser beam welding apparatus with a beam path switcher (30-fig.1 above) for changing beam passages for the laser beam (L-fig.1 above) for the controllable deflection of said laser beam (Maruyama-col.3, lines 1-33; col.4, lines 51-67; col. 5, lines 1-9). The use of a beam switch results in the optimal use of each laser welding head.

It would have been obvious to have one of ordinary skill in the art to modify the modified Alborante reference to include the Maruyama reference since the Maruyama reference discloses a beam path switcher

Art Unit: 3742

capable of effectively and efficiently changing the beam passage direction of the laser beam to the proper laser welding head.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAYA CLARK whose telephone number is (571)270-5605. The examiner can normally be reached on monday through friday, 10 am to 6:00 pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TU HOANG can be reached on (571)272-4780.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAC
AU 3742

/TU B HOANG/
Supervisory Patent Examiner, Art Unit 3742